

Claims

- [c1] A power supply for a gas generating system of the type including a barrier system permeable to selected charged particles flowing from a first side to a second side, the invention comprising:
- a direct current (DC) power source in an electrical power circuit connected across the first and second sides of the permeable barrier system;
 - a plurality of resistive elements each having a fixed ohmic resistance, and each connectable in parallel electrical paths in the electrical power circuit;
 - resistor switch means for selectively connecting a desired resistive element in the electrical power circuit between the DC power source and barrier system; and
 - control means for controlling the connection of at least one resistive element in the electrical power circuit;
- whereby the controller controllably affects a varying flow of charged particles across the permeable barrier.
- [c2] The invention of claim [Claim Reference] wherein the permeable barrier system is a component of a ceramic oxygen generating system (COGS).
- [c3] An electro-chemical gas generating system for concentrating a selected gas from a feedstock fluid of the type including a ceramic membrane system permeable to selected charged particles flowing from a first side to a second side, the invention comprising:
- a direct current (DC) power source in an electrical power circuit connected across the first and second sides of the ceramic membrane system;
 - a plurality of resistive elements each having a fixed ohmic resistance, and each connectable in parallel electrical paths in the electrical power circuit;
 - resistor switch means for selectively connecting a desired resistive element in the electrical power circuit between the DC power source and ceramic membrane system; and
 - control means for controlling the connection of at least one resistive element in the electrical power circuit;
- whereby the controller controllably affects a varying flow of charged particles across the ceramic membrane.

- [c4] The invention of claim [Claim Reference] wherein the resistive element is a resistor.
- [c5] The invention of claim [Claim Reference] wherein the resistive element generates waste energy in the form of heat.
- [c6] The invention of claim [Claim Reference] wherein the waste energy is used to preheat the fluid used as a feedstock for the gas generating system.
- [c7] The invention of claim [Claim Reference] wherein the resistive element is mounted within an oven chamber for the gas generating system.